

**THREE NEW SPECIES OF *SUNDARUS* AMYOT &
SERVILLE, AND KEY TO THE KNOWN SPECIES
(HEMIPTERA: HETEROPTERA: COREIDAE:
COREINAE: COREINI)**

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Abstract.—Three new species of *Sundarus* Amyot and Serville from Brasil, Panama, and Peru are described and illustrated, and a key to the known species of the genus is included.

Key Words.—Insecta, Hemiptera, Heteroptera, Coreidae, Coreini, *Sundarus*, new species, Brasil, Panama, Peru.

Brailovsky (1988) revised the genus *Sundarus* Amyot and Serville, described 13 new species, and discussed the taxonomical importance of the humeral angles and sculpture of the pronotum, the shape of parameres and spermatheca and the general color of the body, including the distributional pattern of the metallic zone. In the same contribution he included a historical review of each species, added new records for the majority of the known species, and gave a key to the known taxa (except to *S. muggei* Schmidt).

Previously, 28 species of *Sundarus* were known. In this contribution, three new species collected in Brasil, Panama, and Peru are described, and a revisioned key to the known species is included (except for *S. muggei* Schmidt).

SUNDARUS OCCUA BRAILOVSKY, NEW SPECIES
(Figs. 2 and 8)

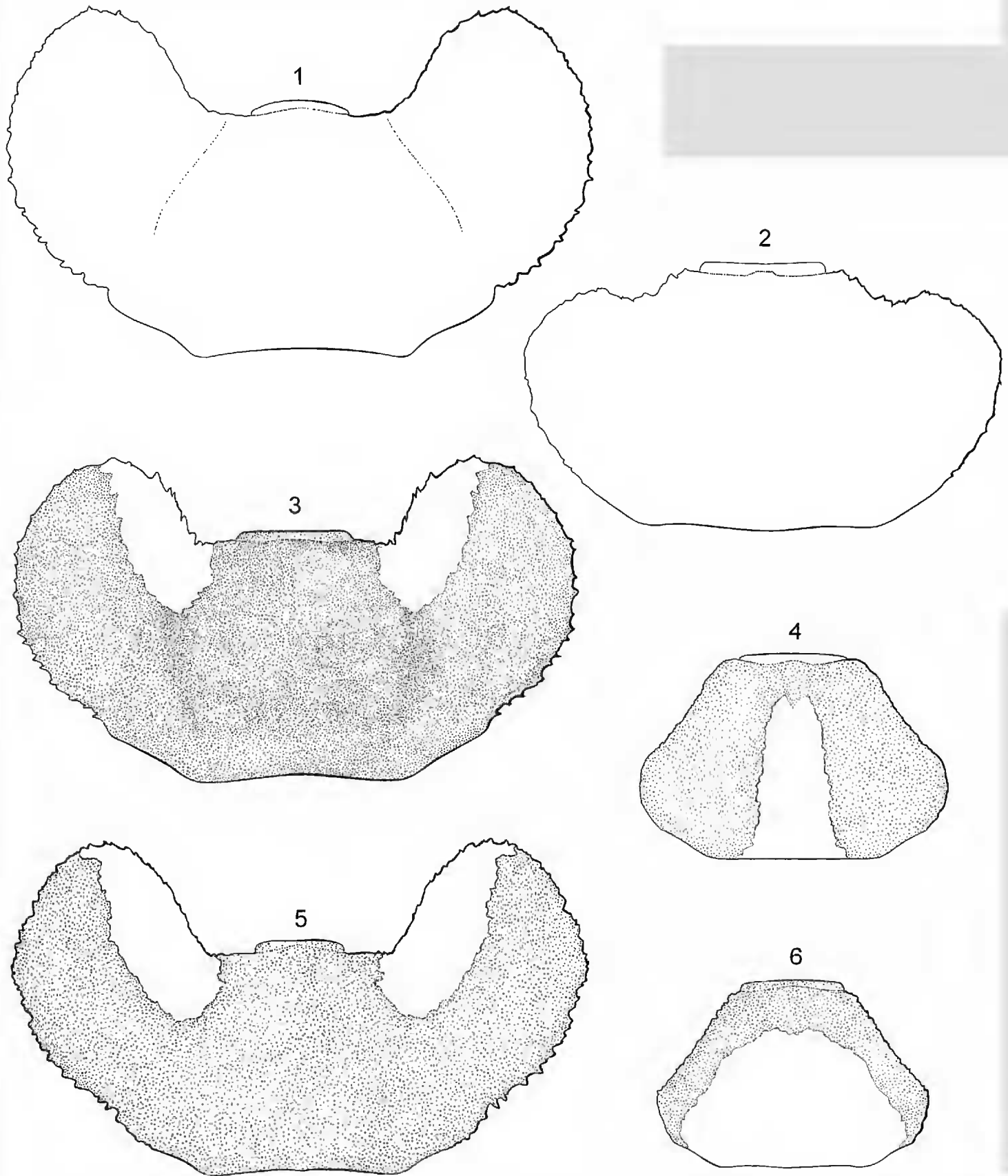
Types.—Holotype female: Panama. Canal Zone, Barro Colorado Isl., Jun 1939, J. Zetek. Deposited in the Colección Entomológica del Instituto de Biología, UNAM, México.

Description.—Female (holotype). Dorsal coloration: Head, pronotum, scutellum, clavus, and corium entirely bright orange; antennal segments I to III reddish brown with blue-green metallic reflections and segment IV reddish brown; hemelytral membrane black; connexivum black with upper margin yellow; dorsal abdominal segments black. Ventral coloration: Head bright orange; rostral segments reddish brown; prosternum, mesosternum, metasternum, anterior and posterior lobe of metathoracic peritreme and adjacent areas black; propleura metallic green with upper margin bright orange; mesopleura and metapleura metallic green with upper border bright orange; legs reddish brown with blue-green metallic reflections; abdominal sterna and genital plates metallic green with pleural margin and posterior border of sterna V to VII yellow. Structure: Head: Rostrum reaching anterior border of metasternum. Pronotum: Anterolateral margins irregularly crenate; humeral angles broad, wider than long, exposed, raised, medium sized, hemispheric, directed upward, and each border crenate; posterolateral and posterior border straight and entire; calli transversely raised (Figs. 2 and 8).

Male.—Unknown.

Measurements.—Female. Head length: 1.56 mm; width across eyes: 2.40 mm; interocular space: 1.32 mm; interocellar space: 0.60 mm; antennal segments lengths: I, 4.08 mm; II, 3.36 mm; III, 3.68 mm; IV, 5.08 mm. Pronotal length: 3.80 mm; maximum width of anterior lobe: 3.20 mm; maximum width of posterior lobe: 6.60 mm; maximum length of humeral angle: 1.52 mm; maximum width of humeral angle: 2.56 mm. Scutellar length: 2.20 mm; width: 2.32 mm. Total body length: 19.28 mm.

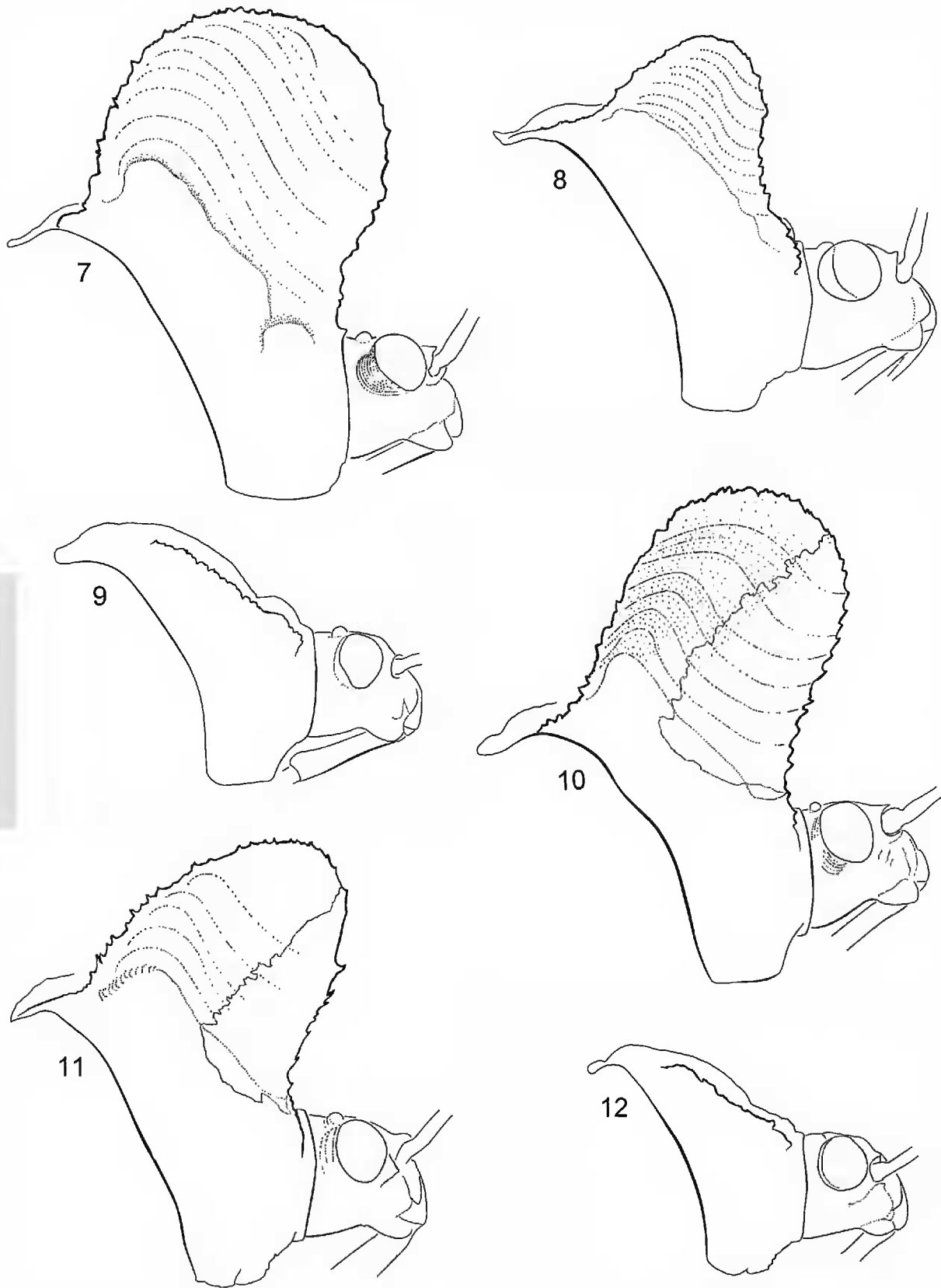
Discussion.—*Sundarus occua* appears to be closely related to *S. ambarinus*



Figures 1–6. Pronotum of *Sundarus* spp., in dorsal view. 1. *S. ambarinus* Brailovsky. 2. *S. occua* Brailovsky, NEW SPECIES. 3. *S. rahmus* Brailovsky, NEW SPECIES. 4. *S. sheilae* Brailovsky. 5. *S. lugens* Horvath. 6. *S. xenia* Brailovsky, NEW SPECIES.

Brailovsky on the basis of the color of pronotum, clavus and corium which are entirely bright orange (*S. occua*) or entirely yellow (*S. ambarinus*). In the other known species of *Sundarus* each region displays extensive black areas.

The most significant difference between the two species lies in the greater expansion of the humeral angles in *S. ambarinus*, where that structure in lateral view almost covers the middle third of the head (Figs. 1 and 7), and by having the thorax entirely yellow. In *S. occua* the humeral expansions are shorter, in lateral view not extending beyond the anterior lobe of the pronotum (Figs. 2 and 8), and the thorax



Figures 7–12. Pronotum of *Sundarus* spp., in lateral view. 7. *S. ambarinus* Brailovsky. 8. *S. occua* Brailovsky, NEW SPECIES. 9. *S. sheilae* Brailovsky. 10. *S. lugens* Horvath. 11. *S. rahmus* Brailovsky, NEW SPECIES. 12. *S. xenia* Brailovsky, NEW SPECIES.

is metallic green with prosternum, mesosternum, metasternum and metathoracic peritreme black, with upper margin of pleural region bright orange.

Etymology.—The species name is an arbitrary combination of letters and is to be treated as a noun.

SUNDARUS RAHMUS BRAILOVSKY, NEW SPECIES

(Figs. 3, 11, 14)

Types.—Holotype male: Peru. San Martin, 6 24' S–76 48' W, 4 Jul 1925, D. Melin. Deposited in Universitets Zoologiska Institut, Uppsala, Sweden. Paratypes:

1 male, 1 female; data: same as holotype. Deposited in Universitets Zoologiska Institut, Uppsala, Sweden and in Colección Entomológica del Instituto de Biología, UNAM, México.

Description.—Male (holotype). Dorsal coloration: Head black with purple metallic reflections; apex of tylus and ocellar tubercle bright to dark orange; inner angle of antenniferous tubercle yellow; antennal segment I red brick, segments II–III reddish brown with blue-green reflections, and segment IV reddish brown; pronotum black with anterolateral margins, anterior third of humeral angles, and short longitudinal stripe running between calli bright orange; collar and calli with blue-green metallic reflections; scutellum bright orange; clavus black with claval commissure creamy yellow; corium black with apical margin creamy yellow and costal border dark orange brown; hemelytral membrane black; connexivum black with upper margin yellow; dorsal abdominal segments black. Ventral coloration: Head reddish brown to black with buccula yellow with bright orange reflections; rostral segment I reddish brown with metallic green reflections, segments II to IV dark reddish brown; propleura black with purple and green metallic reflections, and with upper margin at anterior and middle third bright orange; mesopleura and metapleura black with purple and green metallic reflections; prosternum black; mesosternum and metasternum black with wide longitudinal stripe dark orange on midline; anterior lobe of metathoracic peritreme and adjacent areas black, posterior lobe bright orange; legs brick red; trochanters and femora with blue-green metallic reflections; middle third of abdomen black to dark reddish brown and laterally with three longitudinal rows of colors, each one clearly separated, the inner one metallic green, next metallic purple and the outer included pleural margin yellow; genital capsule black with green metallic reflections, and with posteroventral edge bright orange. Structure: Rostrum reaching posterior margin of metasternum. Pronotum: Anterolateral margins irregularly crenate; humeral angles broad, wider than long, conspicuously exposed, raised, large sized, hemispheric, directed upward, each border crenate, and in lateral view almost reaching the middle third of head (Figs. 3 and 11); posterolateral and posterior border straight, entire; calli transversely flat or slightly raised. Genital capsule: Posteroventral edge simple, with wide central concavity.

Female.—Coloration: Similar to male. Antennal segments I to III red brick and IV reddish brown; collar and calli clearly with blue-green metallic reflections; connexival segments VIII and IX black with upper margin dark yellow; abdominal segments VIII and IX black; gonocoxae I black with blue-green reflections; paratergites VIII and IX black.

Measurements.—Male (female). Head length: 1.72 mm (1.80 mm); width across eyes: 2.16 mm (2.32 mm); interocular space: 1.12 mm (1.22 mm); interocellar space: 0.42 mm (0.52 mm); antennal segments lengths: I, 4.24 mm (4.40 mm); II, 3.44 mm (3.16 mm); III, 3.52 mm (3.56 mm); IV, 5.40 mm (5.20 mm). Pronotal length: 3.44 mm (3.88 mm); maximum width of anterior lobe: 2.40 mm (2.64 mm); maximum width of posterior lobe: 7.30 mm (7.60 mm); maximum length of humeral angle: 2.76 mm (2.92 mm); maximum width of humeral angle: 3.08 mm (3.36 mm). Scutellar length: 2.00 mm (2.36 mm); width: 2.04 mm (2.52 mm). Total body length: 17.98 mm (20.15 mm).

Discussion.—Like *S. lugens* Horvath, with humeral angles of pronotum produced anteriorly into wing-like projections (Figs. 3, 5, 10–11), always bicolorous, with posterior third black, and with head in dorsal view black to reddish brown and always with metallic reflections.

In *S. rahmus*, the anterior lobe of metathoracic peritreme and adjacent areas are black with posterior lobe bright orange, and abdominal sterna are black to reddish brown with three rows of colors clearly separated. In *S. lugens*, the anterior and posterior lobe of metathoracic peritreme and adjacent areas are pale orange, and the color of the abdominal sterna exhibit a pink metallic reflection, with only the pleural margin yellow.

Etymology.—The species name is an arbitrary combination of letters and is to be treated as a noun.

SUNDARUS XENIA BRAILOVSKY, NEW SPECIES

(Figs. 6, 12–13)

Types.—Holotype male: Brasil. Rondonia, 62 km., SW Ariquemes, nr Fzda Rcho. Grande, 4–16 Nov 1997, J. E. Eger. Deposited in United States National

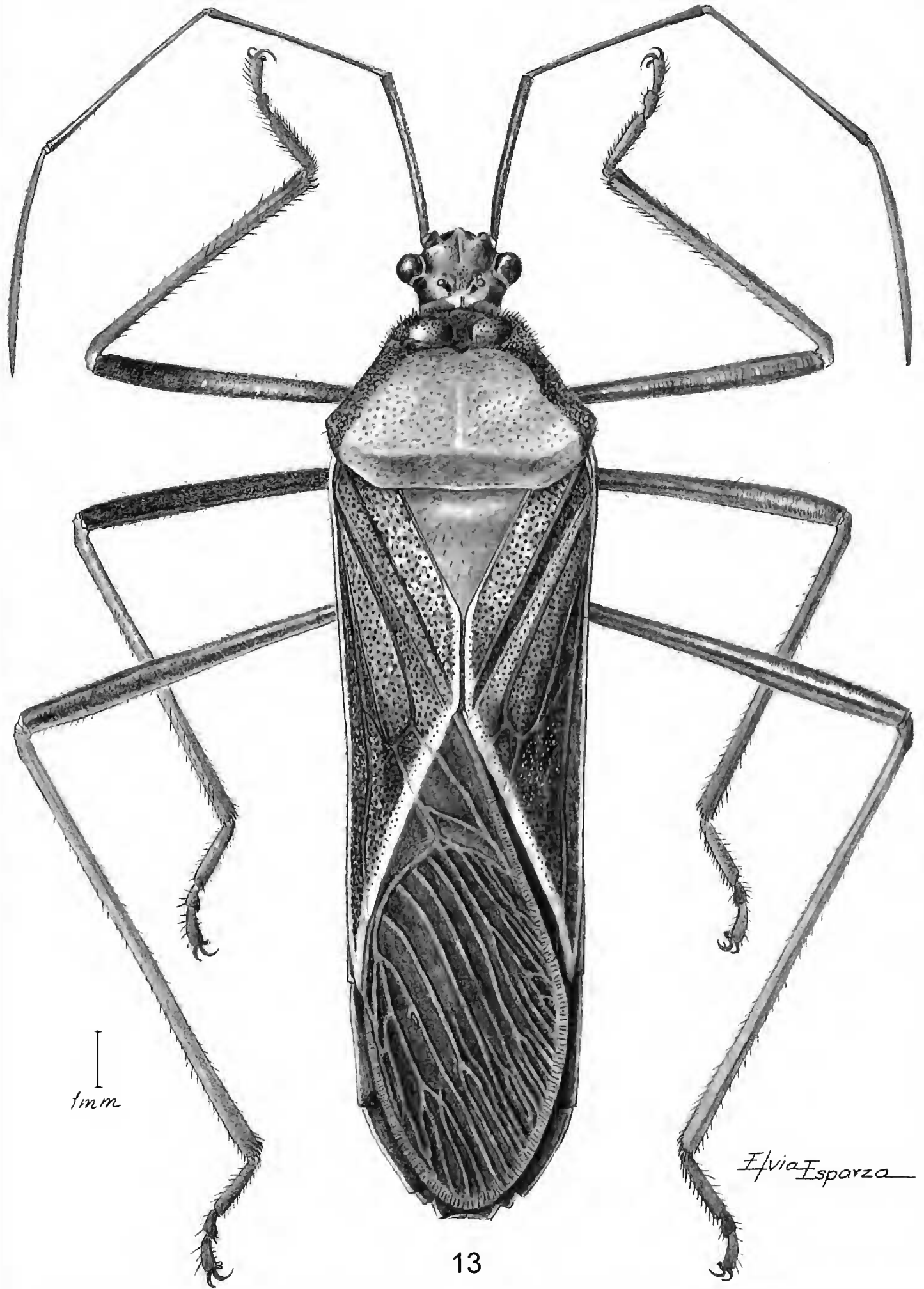
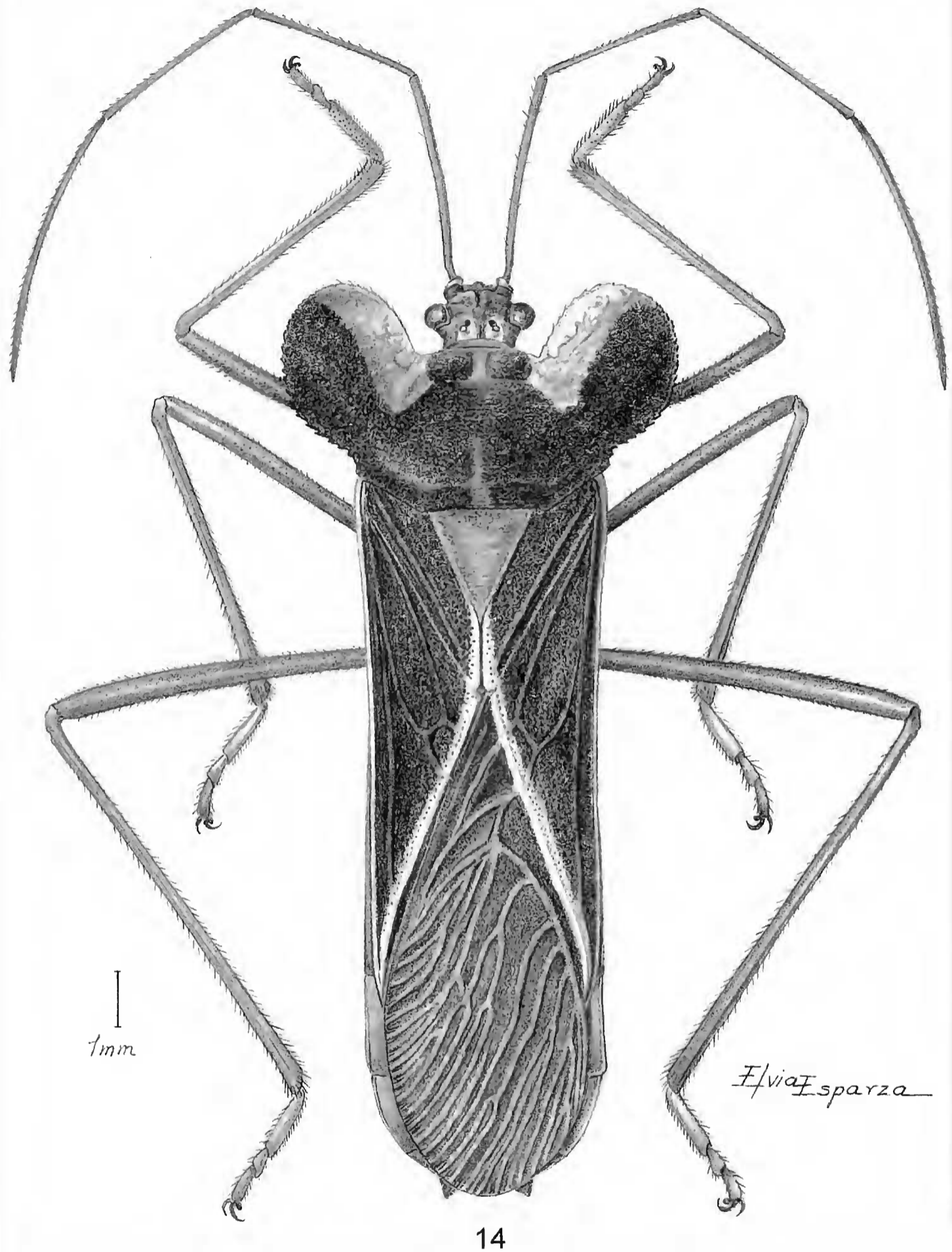


Figure 13. Dorsal view of *Sundarus xenia* Brailovsky, NEW SPECIES.



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Figure 14. Dorsal view of *Sundarus rahmus* Brailovsky, NEW SPECIES.

Museum of Natural History, Washington, D. C. (Drake Collection). Paratypes: 3 males, 4 females; data: same as holotype: 30 Mar–10 Apr 1992, J. E. Eger, and 5 Dec 1991, S. L. Heydon. Deposited in Colección Entomológica del Instituto de Biología, UNAM, México; United States National Museum of Natural History, Washington, D. C. (Drake Collection); and Department of Entomology, University

of California, Davis, California. 1 male; data: Brasil. Rondonia, vic. Caucalandia, 0 32' S–62 48' W, 160–350 m, 14 Oct 1991, J. R. MacDonald. Deposited in Mississippi Entomological Museum, Mississippi State. 1 female; data: Brasil. Rondonia, 10 km S of Caucalandia (Linea C5) off B-65, 19–21 Mar 1991, B. Kondratieff. Deposited in Colorado State University, Department of Entomology, Fort Collins, Colorado. 1 female; data: Peru. Rio Taiche, 1923, H. Bassler. Deposited in American Museum of Natural History, New York.

Description.—Male (holotype). Dorsal coloration: Head metallic green with apex of tylus, inner angle of antenniferous tubercle and ocellar tubercle dark yellow; antennal segments I to III black with blue-purple metallic reflections, and segment IV reddish brown; pronotum metallic green with wide bell-shaped orange spot at posterior lobe and below calli; scutellum orange; clavus and corium black with blue and purple metallic reflections and with claval commissure, apical margin and costal border creamy yellow; hemelytral membrane black; connexivum black with upper margin yellow; dorsal abdominal segments black, except segment VI with blue-purple metallic reflections. Ventral coloration: Head metallic green; buccula orange with green metallic reflections; rostral segments dark reddish brown with blue-green metallic reflections at segments I and II; thorax metallic green with anterior and posterior lobe of metathoracic peritreme and adjacent areas orange; prosternum and mesosternum reddish brown with median longitudinal stripe dark orange; metasternum reddish brown; abdominal sterna metallic green with pleural margin yellow; genital capsule metallic pink with green metallic reflections and with postero ventral edge yellow; coxae, trochanters and femora dark reddish brown with blue-green metallic reflections; tibiae dark brick red with blue-green metallic reflections and tarsi dark brick red. Structure: Rostrum reaching posterior margin of metasternum. Pronotum: Anterolateral margins obliquely straight, scarcely crenate; humeral angles not exposed, truncated with borders sinuate (Figs. 6 and 12); posterolateral and posterior border straight and entire; calli transversely raised. Genital capsule. Posteroventral edge simple, broadly concave.

Female.—Coloration: Similar to male. Connexival segments VIII and IX black with blue-green reflections; abdominal sterna metallic green with pink metallic reflections, and with pleural margin yellow; gonocoxae I metallic pink; paratergite VIII and IX black with green metallic reflections, and with upper margin yellow.

Measurements.—Male (female). Head length: 1.46 mm (1.84 mm); width across eyes: 2.08 mm (2.36 mm); interocular space: 1.08 mm (1.34 mm); interocellar space: 0.47 mm (0.54 mm); antennal segments lengths: I, 3.28 mm (3.60 mm); II, 3.12 mm (3.40 mm); III, 3.40 mm (3.68 mm); IV, 4.64 mm (5.04 mm). Pronotal length: 2.80 mm (4.12 mm); maximum width of anterior lobe: 2.08 mm (3.20 mm); maximum width of posterior lobe: 3.84 mm (5.60 mm). Scutellar length: 1.76 mm (2.20 mm); width: 1.60 mm (2.32 mm). Total body length: 14.65 mm (20.97 mm).

Discussion.—The pronotal shape, including the humeral angles not exposed and truncated (Figs. 6 and 12), the pronotum and thorax not entirely yellow, the pronotal disk not bulging outwards, and rostral segment I reddish brown and never yellow, somewhat similar to *S. sheilae* Brailovsky. *Sundarus xenia* described from Brazil is recognized by having an orange bell-shaped spot covering most of the posterior lobe of pronotal disk (Figs. 6, 12–13). In *S. sheilae*, only recorded from Bolivia, the posterior lobe of pronotal disk is metallic green with an orange longitudinal and relatively narrow rectangular-shape median stripe (Figs. 4 and 9).

Etymology.—The species name is an arbitrary combination of letters and is to be treated as a noun.

KEY TO *SUNDARUS* SPECIES**

1. Humeral angles of pronotum blunt, obtuse, not exposed or barely laminated (Figs. 4, 6, 9, 12) 2

** *S. muggei* Schmidt is excluded from the key.

- 1'. Humeral angles of pronotum produced into wing-like projections (Figs. 1, 3, 5, 7, 10–11) 8
2. Pronotum and thorax entirely yellow *S. splendidus* Distant
- 2'. Pronotum and thorax not entirely yellow 3
3. Pronotum metallic purple; anterior third of pronotal disk strongly convex, with calli sunken; rostral segment I yellow *S. gibbus* Brailovsky
- 3'. Pronotum not metallic purple; pronotal disk not remarkably convex; rostral segment I black to reddish brown 4
4. Pronotum entirely metallic blue-green *S. castus* Brailovsky
- 4'. Pronotum not entirely metallic blue-green 5
5. Pronotum metallic green with an orange spot at posterior lobe 6
- 5'. Pronotum not metallic green with an orange spot 7
6. Posterior lobe of pronotum with an orange bell-shaped spot covering most of disk (Fig. 6) *S. xenia* Brailovsky, NEW SPECIES
- 6'. Posterior lobe of pronotum with orange but narrow rectangular-shaped stripe on middle third (Fig. 4) *S. sheilae* Brailovsky
7. Pronotum black, with anterolateral margins and collar yellow, and calli and adjacent region metallic green *S. ducalis* (in part)
- 7'. Pronotum metallic green and posteriorly with two broad black spots lateral to middle line *S. rufoscutellatus* (Gray)
8. Clavus and corium entirely yellow or bright orange 9
- 8'. Clavus and corium always with black areas 10
9. Pronotum, clavus and corium entirely yellow; humeral angles of pronotum in lateral view almost covering the middle third of head (Fig. 7); thorax entirely yellow *S. ambarinus* Brailovsky
- 9'. Pronotum, clavus and corium entirely bright orange; humeral angles of pronotum shorter, in lateral view not extending beyond anterior lobe (Fig. 8); thorax almost entirely metallic green and never yellow
..... *S. occua* Brailovsky, NEW SPECIES
10. Wing projections of pronotum bicolorous (Figs. 3 and 5) 11
- 10'. Wing projections of pronotum unicolorous, usually yellow or orange and eventually with metallic green reflections at posterior margin 17
11. Head dorsally yellow or orange without metallic reflections
..... *S. regalis* (Westwood)
- 11'. Head dorsally with green, blue or purple metallic reflections. 12
12. Posterior lobe of pronotal disk entirely yellow or at least with broad or narrow longitudinal yellow stripe at middle third 13
- 12'. Posterior lobe of pronotal disk black or metallic blue-green, and never with yellow or orange marks 14
13. Posterior lobe of pronotal disk entirely yellow; wing-like projection remarkably expanded, in lateral view extending beyond the apex of tylus; calli yellow; black spot of wing-like projection surrounded by yellow *S. vulneratus* Brailovsky
- 13'. Posterior lobe of pronotal disk black with yellow longitudinal stripe at mid point; wing-like projection shorter, in lateral view not extending beyond the anterior third of eyes; calli metallic green; posterior lobe of wing-like projection entirely black *S. collinus* Brailovsky

14. Pronotal disk behind calli with blue-green-purple metallic reflections ..
 *S. zonatus* Brailovsky
- 14'. Pronotal disk behind calli black without metallic reflections. 15
- 15'. Pronotal collar yellow; humeral angles of pronotum barely expanded ..
 *S. ducalis* (Stål) (in part)
- 15'. Pronotal collar metallic green; wing-like projections conspicuously ex-
 panded (Figs. 3, 5, 10–11) 16
16. Anterior lobe of metathoracic peritreme and adjacent areas black
 *S. rahmus* Brailovsky, NEW SPECIES
- 16'. Anterior lobe of metathoracic peritreme and adjacent areas pale orange
 *S. lugens* Horvath
17. Scutellum black *S. acutus* Signoret
- 17'. Scutellum yellow or orange 18
18. Anterior and posterior lobe of metathoracic peritreme and adjacent areas
 black to reddish brown *S. nigrosteolatus* Brailovsky
- 18'. Anterior and posterior lobe of metathoracic peritreme yellow or orange
 without black areas 19
19. Head dorsally yellow or orange without metallic reflections 20
- 19'. Head dorsally with green or pink metallic reflections 25
20. Wing-like projections of pronotum longer than wide 21
- 20'. Wing-like projections of pronotum wider than long or subequal 23
21. Wing-like projections rectangular, conspicuously expanded, in lateral
 view extending beyond the apex of tylus *S. selvaticus* Brailovsky
- 21'. Wing-like projections medium sized, acute or rounded, in lateral view
 reaching the eyes 22
22. Mesothorax and metathorax entirely orange; wing-like projections round-
 ed *S. flavicollis* Signoret
- 22'. Mesothorax and metathorax metallic green with pink reflections; wing-
 like projections rectangular *S. tropicalis* Brailovsky
23. Prothorax metallic green with propleural expansions and posterior margin
 orange *S. perpictus* Distant
- 23'. Prothorax yellow with acetabulae metallic green 24
24. Wing-like projections, conspicuously rounded *S. paludum* Brailovsky
- 24'. Wing-like projections shorter and slightly more elongate than rounded
 *S. horni* Schmidt
25. Thorax entirely yellow or orange *S. inca* Breddin
- 25'. Thorax metallic green with or without pink reflections 26
26. Posterior margin of prothorax entirely yellow or orange 27
- 26'. Posterior margin of prothorax metallic green or only with the border
 yellow but never covering entire margin 28
27. Pronotum entirely yellow or orange *S. volutatorius* Brailovsky
- 27'. Pronotum with collar and calli metallic green *S. bellus* Brailovsky
28. Calli yellow or orange *S. mucronatus* Horvath
- 28'. Calli metallic green, with or without pink reflections 29
29. Anterior lobe of pronotal disk entirely metallic green
 *S. humeralis* Horvath
- 29'. Anterior lobe of pronotal disk entirely yellow or orange 30

30. Wing-like projections remarkably expanded, in lateral view extending beyond apex of tylus *S. palmatus* Schmidt
30'. Wing-like projections shorter, in lateral view reaching the middle third of eyes *S. pontifex* Buchana White

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